

REMARKS

Claims 1 and 3-28 are pending. No amendment has been made.

Claim Rejections under 35 U.S.C. §103(a)

I. Rejections of claims 1, 3, 4, 9, and 13 under 35 U.S.C. §103(a) over Kuwabara (US 2002/0127395) in view of Fergason et al. (US 4,950,052) and further in view of Kawasato et al. (US 6,902,791) as evidenced by BYK Additives & Instruments Data Sheet (2008)

Applicants respectfully traverse the obviousness rejections of claims 1, 3, 4, 9, and 13 under 35 U.S.C. §103(a) over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008).

The near-infrared ray absorption layer of the claimed invention comprises a composition containing a near-infrared ray absorbing dye having a maximum absorption in a range of 800 nm in wavelength to 1,200 nm in wavelength, a resin, and a surfactant having an HLB in a range of 2 to 12 in an amount of 0.01% to 2.0% by mass, wherein the surfactant is a silicone type surfactant or a fluorine type surfactant. In other words, the near-infrared ray absorbing dye and the silicone type or fluorine type surfactant are located in the **same** layer, the near-infrared ray absorption layer, in the claimed invention. Kuwabara in view of Fergason and further in view of Kawasato fails to teach or suggest a near-infrared ray absorption layer containing a near-infrared ray absorbing dye **AND** a surfactant that is a silicone type surfactant or a fluorine type surfactant, as recited in claim 1, or a process for preparing a near-infrared ray absorption film, comprising applying a coating solution on a transparent substrate film that contains a resin, an organic solvent, a near-infrared ray absorbing dye, **AND** a surfactant that is a silicone type surfactant or a fluorine type surfactant, as recited in claim 13.

The Office Action (page 4, lines 10-11) acknowledges that neither Kuwabara nor Fergason discloses that the surfactant is a silicone type surfactant or fluorine type surfactant. The Office Action then states that Kawasato discloses an absorption film comprising a near-infrared absorbent dye and a silicone type extender BYK-300, which is a surface-active agent as evidenced by the BYK Additives & Instruments Data Sheet. See Office Action, page 4, lines 14-18 (citing Kawasato, column 3, lines 33-51; Table 1; column 13, line 17). Applicants disagree.

Actually, the silicone type extender BYK-300 of Kawasato was **NOT** included in the layer of the film that contained the near-infrared ray absorbing dye, *i.e.*, the color tone correcting layer A of Kawasato (see column 3, lines 42-49). Instead, the silicone type extender BYK-300 of Kawasato was included in the transparent resin layer B (see column 13, line 1; Table 1), a separate layer that was provided on the color tone correcting layer A in the film of Kawasato (see column 13, lines 35-41; Figure 1; column 2, lines 59-61). Therefore, the near-infrared ray absorbing dye and the silicone type extender BYK-300 were in different layers in the film of Kawasato. Kawasato, like Kuwabara and Fergason, fails to teach or suggest a near-infrared ray absorption film, wherein the near-infrared ray absorption layer comprises a near-infrared ray absorbing dye AND a silicone type surfactant or a fluorine type surfactant.

Furthermore, Kawasato teaches away from including an infrared ray absorbent in the transparent resin layer. Kawasato discloses in column 1, lines 52-56, that incorporation of an infrared ray absorbent in the polyurethane resin layer, in a film as disclosed in JP-A-10-219006, would cause inadequate heat resistance and durability of the infrared ray absorbent so that the infrared ray shielding property would deteriorate over time. The polyurethane resin layer referred to in Kawasato, column 1, lines 53-54, corresponds to the transparent resin layer of Kawasato, which contains the silicone type extender BYK-300. See Kawasato, column 5, lines 1-4; column 13, lines 1-26; Table 1. In addition, Kawasato teaches that in a method of mixing and blending an infrared ray absorbent with the transparent substrate itself, the type of the infrared ray absorbent to be used is significantly limited due to the required high processing temperature (see column 1, lines 11-20). Because Kawasato teaches away from including the infrared ray absorbent in the same layer as the silicone type extender BYK-300, there is no motivation to modify the near infrared absorption material of Kuwabara in view of Fergason by adding the silicone type extender BYK-300 of Kawasato to the layer containing the near infrared absorption dye.

For at least these reasons, Kuwabara in view of Fergason and further in view of Kawasato fails to teach or suggest the claimed invention wherein the near-infrared ray absorption layer comprises a near-infrared ray absorbing dye AND a surfactant that is a silicone type surfactant or a fluorine type surfactant. Withdrawal of the obviousness rejections of claims 1, 3,

4, 9, and 13 over Kuwabara in view of Fergason and further in view of Kawasato is respectfully requested.

II. Rejections of other claims under 35 U.S.C. §103 over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008), as applied to claims 1, 3, 4, 9, and 13, and further in view of other references

Claim 5 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of JP 2004-202899 (“Sato”); claims 6 and 7 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of US 6,703,138 (“Taki”); claim 8 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of US 2003/0186040 (“Oya”); claims 10 and 24 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of US 2003/0021935 (“Moriwaki”); claims 11 and 12 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of JP 2003-127310 (“Kumano”); claim 14 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of US 6,770,430 (“Kubo”); claims 15 and 16 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Fergason and further in view of Kawasato as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1-4, 9 and 13, and further in view of US 2004/0071883 (“Ogawa”); claim 17 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of

Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, 3, 4, 9 and 13, and further in view of Kumano; claim 18 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 17 above, and further in view of US 4,948,635 ("Iwasaki"); claim 19 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 17, and further in view of Ogawa; claims 20 and 21 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claims 1 and 13, and further in view of Iwasaki; claim 22 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 20, and further in view of Ogawa; claim 23 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 20, and further in view of Kubo; claims 26-27 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claims 1, 3, 4, 9, and 13, and further in view of US 5,691,838 ("Shouji"); claim 25 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kuwabara in view of Ferguson and further in view of Kawasaki as evidenced by BYK Additives & Instruments Data Sheet (2008) as applied to claim 1, and further in view of Hanada et al. (US 6,734,946). Applicants traverse the rejections.

As discussed above, Kuwabara in view of Ferguson and further in view of Kawasaki fails to teach or suggest the claimed invention wherein the near-infrared ray absorption layer comprises a near-infrared ray absorbing dye AND a silicone type surfactant or a fluorine type surfactant. The deficiency of Kuwabara in view of Ferguson and further in view of Kawasaki is not cured by any of Sato, Taki, Oya, Moriwaki, Kumano, Kubo, Ogawa, Iwasaki, Shouji, Hanada and combinations thereof at least because none of them teaches or suggests one of ordinary skill in the art to modify the near-infrared absorption material of Kuwabara in view of

Ferguson and further in view of Kawasato to arrive at a near infrared absorption film wherein a near-infrared ray absorption layer comprises a near-infrared ray absorbing dye AND a silicone type surfactant or a fluorine type surfactant, as recited in present claim 1 (and all claims dependent therefrom), or a process of making a near infrared absorption film, comprising applying a coating solution on a transparent substrate film that contains a resin, an organic solvent, a near-infrared ray absorbing dye, AND a surfactant that is a silicone type surfactant or a fluorine type surfactant, as recited in present claims 13, 17, and 20 (and all claims dependent therefrom). The claimed invention would not have been obvious over the cited references. Withdrawal of the obviousness rejections is respectfully requested

CONCLUSION

The Examiner is encouraged to contact the undersigned regarding any questions concerning this amendment. In the event that the filing of this paper is deemed not timely, applicants petition for an appropriate extension of time. The Commissioner is authorized to debit Deposit Account No. 11-0600 the petition fee and any other fees that may be required in relation to this paper.

Respectfully submitted,
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